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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,312	03/25/2004	Takafumi Ueno	1011350-000332	5636

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EXAMINER
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FLICK, JASON E

ART UNIT	PAPER NUMBER
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3763

NOTIFICATION DATE	DELIVERY MODE
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06/10/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/808,312	<b>Applicant(s)</b> UENO ET AL.	
	<b>Examiner</b> JASON FLICK	<b>Art Unit</b> 3763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Examiner acknowledges the reply filed on 03/04/2010 in which claims 1, 12, and 15 were amended. New claims 18 and 19 have been added. Currently, claims 1-7 and 9-19 are pending for examination in this application.

### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-7 and 9-19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 7,322,960. Although the conflicting claims are not identical, they are not patentably distinct from

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each other because the claims contain similar structure and subject matter. The differences between the claims would be obvious to one of ordinary skill in the art.

***Terminal Disclaimer***

4. The terminal disclaimer filed on 03/04/2010 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of USPN 7,322,960 has been reviewed and is NOT accepted.

a. The person who signed the terminal disclaimer is not recognized as an officer of the assignee, and he/she has not been established as being authorized to act on behalf of the assignee. See MPEP § 324.

5. An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c).

6. It would be acceptable for a person, other than a recognized officer, to sign a terminal disclaimer, provided the record for the application includes a statement that the person is empowered to sign terminal disclaimers and/or act on behalf of the organization.

Accordingly, a new terminal disclaimer which includes the above empowerment statement will be considered to be signed by an appropriate official of the assignee. A separately filed paper referencing the previously filed terminal disclaimer and containing a proper empowerment statement would also be acceptable.

***Election/Restrictions***

7. Newly submitted claim 18 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The originally presented claim language did not present a species wherein the injection needle is formed as part of the insertion member.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 18 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 6, 7, 9, 10, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Eggers et al. (USPN 6,106,524).

10. [Claims 1, 6, 7, 9, 10, and 19] Eggers teaches a catheter to be percutaneously inserted into a living body lumen, said catheter (figure 8a, item 60) comprising: a sheath portion (figure 8a, item 67) having a lumen extending therein (figure 8a, item 62), an insertion member slidably disposed in said lumen of said sheath portion and having a

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distal end portion capable of protruding from a distal end portion of said sheath portion (figure 8a, item 61), an injection needle defining a distalmost end of said insertion member for injecting a therapeutic composition into a target tissue in a living body (figure 8b, item 130), and a first electrode, separate and distinct from said injection needle, fixed at said distal end portion of said insertion member and spaced a predetermined distance from a bevel of said injection needle disposed at an outer circumferential surface of said distal end portion of said insertion member for measuring a cardiac action potential (figure 8a and 8b, item 65), and further comprising a second electrode disposed at said distal end portion of said sheath portion for measuring a cardiac action potential (figure 8a, item 66), wherein the electrodes are spaced apart from each other along the longitudinal direction of said insertion member (figure 8b).

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eggers et al. (USPN 6,106,524).

15. [Claim 11] Eggers teaches the limitations of claim 7, upon which claim 11 depends. Eggers does not explicitly state that the electrode located on the distal portion of the insertion member is spaced greater than 1 mm from the distal end of the injection needle along the longitudinal direction. However, the spacing distance is a preferred design choice which, absent criticality, would be obvious to one of ordinary skill in the art.

16. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggers et al. (USPN 6,106,524), in view of Shapland et al. (WIPO 99/04851).

17. [Claims 2 and 3] Eggers teaches the limitations of claim 1, upon which claims 2 and 3 depend. Eggers does not specifically disclose target cardiac tissue and therapeutic compositions of nucleic acid, proteins, or cells. However, Shapland teaches

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an intracardiac drug delivery catheter which discloses target tissue to be cardiac tissue (page 5, lines 7-21) and an injected therapeutic composition containing a nucleic acid, a protein, or cells (page 6, lines 23-32). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the structure taught by Eggers with the use of cardiac tissue as target tissue and the therapeutic composition, as taught by Shapland, in order to provide additional catheter capabilities allowing for alternative cardiac therapies.

18. [Claims 4 and 5] Eggers teaches the limitations of claim 1, upon which claims 4 and 5 depend. Eggers does not specifically disclose a through-hole located on the distal end portion of the sheath, which communicates with the lumen. However, Shapland teaches a cardiac delivery catheter comprising a plurality of through-holes (outlet ports), located on the sheath portion of a catheter (figure 3, items 150), which communicates with the lumen. Additionally, Shapland discloses this plurality to be greater than a distance of 1mm from the end face of the distal portion of the sheath, along the longitudinal direction (page 8, lines 30-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the structure taught by Eggers with the through-hole structure taught by Shapland in order to provide the desired result of efficient drug delivery.

19. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haim et al. (USPN 6,309,370), in view of Eggers et al. (USPN 6,106,524).

20. [Claims 12-15] Haim teaches a catheter (figure 1a, item 20) capable of being percutaneously inserted into a living body lumen, comprising: a sheath portion (figure

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1a, item 26) containing a lumen, an insertion member (figure 1a, item 24) slidably disposed within the lumen of the sheath portion and having a distal end portion capable of protruding from a distal end portion of the sheath, an injection needle (figure 1a, item 24) located at the distal end of the insertion member for injecting a therapeutic composition into a target tissue, and an electrode, separate and distinct from said injection needle, (column 12, lines 28-31)(figure 1a, items 38) located at the distal end of the catheter which is capable of measuring cardiac action potential. Additionally, Haim teaches a puncture detection unit (figure 2) to which a first and second electrode are connected (figure 1a, items 38), which is capable of detecting the puncture (position) of the injection needle based on a measured cardiac action potential (column 12, lines 26-31). Haim does not specifically disclose the first electrode is fixed at the distal end portion of the insertion member and spaced a predetermined distance from a bevel of an injection needle or a distal second electrode is located on the side of the proximal end of the catheter relative to the first electrode. However, Eggers teaches a catheter comprising a first electrode (figure 8a, item 65) fixed at the distal end portion of an insertion member (figure 8a, item 61) and spaced a predetermined distance from a bevel of an injection needle (figure 8b, item 130) disposed at an outer circumferential surface of said distal end portion of said insertion member for measuring a cardiac action potential (figure 8a, item 65), and further comprising a second electrode disposed at said distal end portion of said sheath portion for measuring a cardiac action potential (figure 8a, item 66), wherein the second electrode is disposed at a distal end portion of said catheter, provided as a separate body independent from the catheter, and is

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located on the side of the proximal end of said catheter relative to said first electrode (figure 8b). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the structure taught by Haim with the location of the electrodes, as taught by Eggers, in order to provide increased flexibility in the detection of the position of the injection needle. In addition, Haim also discloses the insertion of the catheter, as well as the puncturing and injecting of a target tissue (column 9, lines 12-16). Additionally, Haim teaches that the injection of the therapeutic composition is based on the measured cardiac action potential of the electrodes (column 6, lines 9-10; see also column 9, lines 39-44).

21. [Claims 16 and 17] Haim and Eggers teach the method steps of claim 15, upon which claims 16 and 17 depend. In addition, Haim teaches the method steps of bringing the distal end portion of the sheath portion into contact with the target tissue, thereby measuring and detecting a change in cardiac action potentials with the electrodes (column 12, lines 28-31). Furthermore, Haim discloses the method steps of utilizing the insertion member distally of the sheath in order to protrude the injection needle from the sheath, thereby allowing the injection needle to puncture the target tissue (column 8, lines 23-25). Haim also teaches the injection needle is capable of administering the therapeutic composition into the target tissue based on whether or not a change in cardiac action potential is detected (column 6, lines 8-10).

***Response to Arguments***

22. Applicant's arguments filed 03/04/2010 have been fully considered but they are not persuasive. Applicant's representative asserts that the prior art of record does not disclose the invention as claimed.

23. Examiner has fully considered the applicant's arguments but they are not persuasive. It is the examiner's position that given a careful reading, the claims do not distinguish over the prior art of record.

24. The amendments made to the independent claim language have resulted in a significant change in scope, thereby compelling the examiner to re-evaluate and interpret the prior art of record. As a matter of record, the examiner would like to highlight the phrase "distal end portion" which appears throughout the claim language. As noted in the rejection above, the examiner has given this phrase the broadest reasonable interpretation and notes that a "distal end portion" can be interpreted simply as a range, rather than a distinct point, in space. The examiner suggests claim amendments which would further limit this claim language.

25. Therefore, the prior art of record teaches all elements as claimed and these elements satisfy all structural, functional, operational, and spatial limitations currently in the claims. Therefore the standing rejections are proper and maintained.

***Conclusion***

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON FLICK whose telephone number is (571)270-7024. The examiner can normally be reached on Monday through Thursday, 7:00am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nicholas Lucchesi can be reached on 571-272-4977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. F./

Examiner, Art Unit 3763

06/04/2010

/Nicholas D Lucchesi/

Supervisory Patent Examiner, Art Unit 3763